and one that all having to cultivate land will do well for the present to practise. To those engaged in the cultivation of tender plants under glass, the too common flooded stokeholes are grave calamities. It is scarcely probable that whilst the water lies so high in the soil we shall have severe frost, but with so much moisture in the atmosphere fire-heat is as essential for the reduction of damp as it is to maintain a high temperature. The expectation that we shall have a soft, moist winter, seems even more likely to be verified.

—— In one of Messrs. VEITCH'S Orchid-houses is now flowering a charming plant of MASDEVALLIA TOVARENSIS. From a compact tuft of broadly oblong strap-shaped leaves rise no less than twenty-nine flower-spikes, bearing some three, others four, pure white flowers. It is a veritable gem.

## THE FRUITS AND VEGETABLES OF 1876.

THE year 1876 stands almost pre-eminent for the great paucity of its Fruit crop in general, and of new or notable varieties in particular, so that our task of reviewing the acquisitions during the past year is an exceedingly light one. This great scarcity in the case of the outdoor fruits, such as Apples and Pears, is chiefly attributable to the action of the late spring frosts, which were last season of unusually long duration. Notwithstanding this general scarcity, we have the pleasure to record the introduction of a few sterling representative fruits.

Grapes naturally claim our first attention, their cultivation and improvement being specially the property of the British gardener. Here we have in Clive House Seedling a very decided acquisition in the class of late black Grapes. This is a seedling variety raised by a gentleman amateur, D. P. Bell, Esq., of Clive House, Alnwick, and which is stated to be a cross between the Black Morocco and another black variety from Wortley. The bunches are large and well shouldered, of much the same appearance as the Alicante; the berries large, ovate in shape, with a dense black bloom. In flavour it has the rich sparkling character of the Morocco, and is very pleasant, so that if it is free from the bad setting qualities of that variety, and of good constitution, this will prove to be one of the best late black Grapes, and we congratulate Mr. Bell on his success. We may note also, *en passant*, how well Mr. Pearson's last introduction, "Mrs. Pearson," is proving. It is one of the best white Grapes in cultivation.

Pine-apples merit this season a share of our attention. Seedling Pine-apples are of rare occurrence, and their production is evidence of considerable skill and perseverance. We therefore compliment Mr. Hunter, the very able gardener at Lambton Castle, for his success so far. His new seedling, "Lady Beatrice Lambton," is a large and very handsome fruit, not unlike a good Cayenne. Some fruits exhibited before the Fruit Committee were of fine appearance, but of inferior quality; we have, however, tasted some fruits which were excellent, so that we look forward to its taking a front place, independently of its great size and beauty, which will always recommend it.

Apples furnish us with no novelties of particular note this season, and Pears are nearly equally wanting; yet here we must mention one or two excellent additions, as Amiral Cecile and Willison's Queen Victoria—the former one of the richest-flavoured January Pears, the latter a good early autumn sort. Both are of medium size, and well worthy of cultivation.

Of Peaches and Nectarines there is little of novelty to record, but attention may be called to some of the older but too little known sorts, such as Goshawk, which is one of Mr. Rivers' best seedlings, and is a fine large and excellent sort. Let us mention also Desse tardive as one of the handsomest and best late Peaches, far too little known.

Strawberries are not so prolific of noyelty either this season, as usual, the excessive drought having materially interfered with their progress. A great many new Strawberries are annually introduced to us from the Continental raisers, the majority of which are worthless. Of the newer English sorts we would especially recommend Enchantress, Excelsior, Countess, &c., all seedlings of Dr. Roden — free and abundant bearers, of excellent quality, and most distinct.

Melons appeared in plentiful array, as usual, some promising scarlet-fleshed varieties coming from Kashgar, of which more may be said anon. Mr. Frisby's Alexandra Palace proved to be a first-class, high-flavoured green-flesh.

In the VEGETABLE DEPARTMENT the number of new names annually introduced to notice by our enterprising seedsmen is most confusing. We fail to see the necessity or the policy of this continual application of new and special names to well-known varieties. A new name cannot improve the quality of the article, neither do we believe it can tend to the reputation of its introducer in the long run. A spade is still a spade, and we should prefer to call it so, and the Ne Plus Ultra Pea bears a more honourable character by that name than any of its new-fangled *aliases* will ever attain. Improved selections of vegetables are most meritorious and require distinctive appellations, and it is mainly by careful selection that the high standard of excellence is maintained, so it has apparently become the fashion now to bestow a special name on all carefully saved seeds, whilst the original names are lost sight of. This is a tendency greatly to be deplored and discountenanced.

Amongst Peas, which of late years have been replete with novelty, thanks to the great skill of our hybridists, we have again a few very promising varieties to notice. Criterion, of Messrs. Veitch, is a seedling of the late Mr. Standish's, and is an early Ne Plus Ultra, than which it wants no better character. Sutton's Giant Emerald Marrow is a novel and very distinct sort, a tall, strong-growing variety, with large pods, and of good quality. It has the peculiar glassy green of the old Danecroft Rival. Carter's Commander-in-Chief is a large and very fine showy semi-wrinkled green Marrow in appearance like Supreme. Allen's Champion is a good selection of Dickson's Favourite, and Taber's Market Favourite is a good selection of the Essex Rival, but distinct.

In Onions we call special attention to the Trebons, which, although not a new variety, was proved last season to be so exceptionally good for autumn sowing that it deserves all the notice we can give it. We would also note the Rocca as being the best form of the large Tripoli section.

Of Kidney Beans we make note of the Early White Etampe, as being a very early sort; Nain Blanc Quarantin, is an excellent second early; Rachel, Yellow Champion, and Zebra are all excellent sorts, if so many varieties are really required.

In Cauliflowers there is nothing specially new. In the Chiswick trials the Lenormand was specially distinct, as was the Extra Earliest Paris, which is used for forcing purposes, and little known in this country. The Erfurt variety seemed to enguif many of the so-called new varieties of former years. Of Cabbages, Carter's Heartwell is a good variety of the Nonpareil.

Amongst Salads we must not omit to mention the Whitloof, or Brussels Chicory. This is not a new vegetable, but although extremely common in many parts of the Continent, it was scarcely known or cultivated in this country until the past season. It is of the easiest cultivation, and when blanched like Seakale it is excellent as a salad or cooked. Speaking of Seakale, we are reminded of a distinct sort cultivated by Messrs. Stuart & Mein, the leaves of which are green, with no purplish colouring, consequently when blanched they are pure white, and although exposed, never assume that purplish tint of the common form. On this account it may prove valuable as a market variety.

Potatos come last, but are far from being the least of the gardener's charges, or the least deserving of notice. Of late years it is pleasant to note the increasing popularity of this vegetable. Immense interest is now being taken, not only in improved cultivation, but also in the production of improved varieties, both in this country and in America, and the improvement is manifest. From America we have received quite a distinct class, remarkable for their great cropping qualities, and for possessing a peculiar whiteness of flesh. In some seasons and in some situations they are wonderfully good, but in others they lack the finer qualities of our best English varieties. To overcome this—to blend the good properties of both in one, many of our enterprising men have been endeavouring to cross them, and in this Mr. Bennett, of Enville, has succeeded by producing the Schoolmaster, now offered by Mr. Turner. This is a splendid victory, and a splendid Potato in every sense. It is of the Regent appearance — a most extraordinary cropper, and of first-class quality. Criterion is very similar to this. Wyville Seedling is a fine handsome Potato. It is a seedling raised at the village of Wyville some years ago, and, strangely enough, is scarcely distinguishable from the American Bresee's Prolific. Of other sorts we mention Prince Arthur, pertaining to the Lapstone section; Lye's Favourite, a very handsome coloured sort, fine for exhibition purposes; Brownell's Superior, of American origin; Garibaldi, International, Worthington G. Smith, &c., and many more of the many excellent sorts of our great Potato authority, Mr. Robert Fenn.

## Home Correspondence.

**Holly Berries.**—Several of your correspondents have noticed the scarcity of Holly-berries in different parts of the country, and the same thing may be observed to a remarkable extent in this neighbourhood. Your correspondents account for the fact by spring frosts, but it must be remembered how hardy a plant the Holly is, being found in Norway as far north as the 62d degree of north latitude (Lecoq *Géographie Botanique*, vii., p. 370), another explanation seems to me more probable. Bees of all kinds were in this neighbourhood extraordinarily rare during the spring. I can state this positively, as I wished to observe a particular point in their behaviour in sucking the common red Clover; and, therefore, often visited the fields where this plant was growing; but I could see very few bees. I was so much struck by this fact that I examined several meadows abounding with flowers of all kinds, but bees were everywhere rare. Reflecting, in the course of the summer, on this extraordinary scarcity, it occurred to me that this part of England would be temporarily in the same predicament as New Zealand before the introduction of hive bees, when the Clovers (which, as I know by trial, require the aid of bees for perfect fertilisation) would not set seed. By an odd chance I received the very next morning a letter from a stranger in Kent, asking me if I could assign any reason for the seed-crop of Clover having largely failed in his neighbourhood, though the plants looked vigorous and healthy. Now the Holly is a dicœcious plant, and during the last forty years I have looked at many flowers in different districts, and have never found an hermaphrodite. Bees are the chief transporters of pollen from the male to the female tree, and the latter will produce but few berries if bees are scarce. In my *Origin of Species* I state that, having found a female tree exactly 60 yards from a male tree, I put the stigmas of twenty flowers, taken from different branches, under the microscope, and on all, without exception, there were a few pollen-grains, and on some a profusion. As the wind had set for several days from the female to the male tree, the pollen could not thus have been carried. The weather had been cold and boisterous, and therefore not favourable; nevertheless every female flower which I examined had been effectually fertilised by the bees, which I saw at work, and which had flown from tree to tree in search of nectar. Therefore, as I believe, we cannot decorate our Christmas hearths with the scarlet berries of the Holly, because bees were rare during the spring; but what caused their rarity I do not in the least know. *Charles Darwin, Down, Beckenham, Kent, Jan.* 3.

**Premature Growth of Vine Roots, &c.**—"We are so liable to shape our practice in accordance with preconceived notions, that have become deeply rooted through long usage, that we often adhere to the old treatment without having tried any other." This, the closing sentence of Mr. Baines' article on this subject (on pp. 775 and 776 in your last volume), has struck the right key, not only with regard to the subject in hand, but to many other practices connected with horticulture, and until each one for himself has sufficient manliness to have an opinion of his own, and moral courage enough to express it, despite the taunts and sneers that he is sure to meet, can the old ruts, that we are liable to run in because our forefathers did, be filled up. As horticulturists, there is a clannish feeling amongst us, and most of the brotherhood are at all times most willing to assist each other with ideas or more substantial aid. The moment, however, such aid tends—as in some instances it does—to discourage thinking on the part of the recipient, and makes him, as it were, a mere machine, dependent on, and working out the ideas of others, wondering what treatment Messrs. Thomson, Fowler, Coleman, Johnston, Hunter, and other noted Grape-growers give their Vines to obtain such marvellous results—causing him, instead of putting his own brains in motion, or tucking up his own sleeves, to wait anxiously to hear or read what these gentlemen have to say — then it is that such

Indies, TILLANDSIA USNEOIDES, figured in the July number of the *Botanical Magazine*, is well described in SLOANE'S *History of Jamaica* as a "mossie plant . . . with stalks the bigness of a thread, consisting of a thin skin, whitish, as if covered with a hoar-frost, having within that a long tough black hair, like a horse-hair . . . very often a yard long, hanging down on both sides from the branches of the trees they adhere to, being curled, or twining and winding within another, and making a show of an old man's beard (whence the name), or as if they were made to climb, which I never saw they did." Further on he says "it is used to pack up anything which otherwise may easily be broken, as cotton is sometimes made use of with us;" and again, "the inward black hairs of this moss's stalk are made use of by the birds called Watchipickets for making their curiously contrived nests hanging on the twigs of trees." To this description the Editor of the magazine adds that the Spanish Moss is a very widely distributed plant in the hotter parts of America, from Carolina to South Brazil, and on the Andes, hanging in bunches sometimes many yards long from the branches of trees. It has frequently been sent to England as packing for Orchids, but rarely alive, and it is not till quite lately that it has been successfully cultivated at Kew from plants imported (as packing) from Jamaica.

—— At the meeting of the Prince Consort's Royal Association at Windsor on July 13, Messrs. SUTTON & SONS exhibited a beautiful collection of ANNUALS grown at their seed farm, Reading. It consisted of upwards of two hundred varieties, and attracted much attention from the Royal and other distinguished visitors.

—— In the *Berliner Monatsschrift* for June, H. SCHARRER, Garden Inspector in Tiflis, gives an enumeration of PLANTS USED BY THE INHABITANTS OF TRANS-CAUCASIA AS VEGETABLES and as remedies for various complaints. Among the more noteworthy are the following, with their uses:—If there is much Lolium temulentum in the grain used for making bread the root of Helleborus abchasicus is thrust into the newly-made dough, from which then a quantity of turbid yellow water flows, and the bread is thereby rendered wholesome. The fruit of Physalis Alkekengi is employed to colour butter. Amaranthus viridis, several species of Rumex and Chenopodium, and Urtica urens and dioica are eaten as vegetables. The young shoots of the Nettles, from 1 to 2 inches long, are highly esteemed and expensive, and the leaves of various kinds of Dock are collected and dried for winter use. Dracocephalum moldavicum is cultivated as a substitute for tea, and an infusion of the leaves of Mentha Piperita and M. sylvestris is also drunk instead of tea. The fruit of Sambucus Ebulus is used to make red wine of white; but wine thus treated is injurious to the health. Achillea Millefolium dried and reduced to powder is applied to open wounds. Chelidonium majus is given in cases of internal injury; and infusion of Verbena officinalis is a favourite febrifuge. Galium Mollugo, chopped fine and sopped in sour milk, is given to young geese; and Tragopogon species is collected when young, and eaten raw as a blood purifier.

—— At the meeting of the Council of the ROYAL BOTANIC SOCIETY held on July 14, a SPECIAL GOLD MEDAL was awarded to Messrs. J. CARTER & Co., of Holborn, &c., for the novel and extensive collection of fine-foliaged and flowering annual and other plants grown in pots from seed, which had been exhibited in the gardens of the Society during the month of June.

—— The question of the NECESSITY OR UTILITY OF ANIMAL FOOD TO CERTAIN PLANTS seems to occupy the minds of many observers to the exclusion almost of the possibility of their being able to digest animal matter without its being necessary, or perhaps even advantageous, to their perfect development. As to the utility of animal food to plants, this is a point that no one will pretend to be able to determine by experiments on individual plants. To be conclusive, the experiments must be continued for a number of seasons or generations until some tangible result is obtained. Trials with individual plants appear to prove that animal food is not indispensably necessary to their complete nutrition, and this result, reasoning from analogy, might have been predicted. In tropical and subtropical countries there are thousands of human beings who rarely, if ever, taste animal food, and it is contended that they are equally as strong and productive as the omnivorous peoples of the same regions. But even if we refuse to accept this view so far as the human races are concerned, it is worthy of consideration in any argument relating to plants. Because animal matter is not indispensable to plants, or because it does not appear to be useful in their nutrition, it does not follow that they are unable to digest and assimilate it. Nevertheless, many persons are seeking to prove or disprove the power of certain plants to dissolve and absorb animal substances by first of all determining whether the plants are able to live without. But as one fact cannot invalidate another, the simpler and more logical procedure would be to finally settle whether plants absorb animal matter at all, and then treat the question of the necessity or utility of it to the plant on its own merits.

—— We have had occasion more than once to comment on the very miscellaneous bottles and other vessels considered good enough to exhibit cut blooms in at flower shows. Passing through the show of the National Carnation Society at the Royal Aquarium on Wednesday, we were struck with the form of bottle employed by the Society in question, and which is shown in the annexed sketch (fig. 17). It will be seen that the form is at once serviceable and pleasing. The cost is also slight. Messrs. BOURNE & SONS,

FIG. 17.—BOTTLE FOR SHOWING CUT-FLOWERS. (HALF REAL SIZE.)

Denbigh-by-Derby, we believe, supplied them to the Society at the rate of 18*s.* a gross. There really is no reason why flower shows should not be made as complete and perfect in their appointments as possible, and a little matter like that just alluded to makes a great deal of difference in the amount of gratification gained by the spectator.

—— Professor REICHENBACH, being about to leave home for a short time, requests us to say that urgent letters may be forwarded to him, Poste Restante, Nice, France, till August 5. He further begs his correspondents to attach to each specimen they send him a label with a number and the initials of the sender, corresponding with similar information given in the letter accompanying the specimens.

—— From an official statistical return issued by the Minister of Agriculture in France, we learn some details as to the ANNUAL FRUIT CROP OF FRANCE. The yield of stone fruit, Plums, Apricots, Peaches, Cherries, &c., in 1873, was returned at the value of £423,000, but the mean average is double this amount. Of seed fruit, Apples, Pears, Quinces, &c., the value was stated at over £2,500,000, but the average is about one-third higher than this. Other fruit trees, such as Capers, &c., produce about £300,000 more. The acreage under Vines is about 5 per cent. of the productive land, and comprises 2,583,000 hectares (6,379 309 acres). Algeria has also about 46,000 acres under Vines. Bavaria has 22,000 hectares under Vines; Rhenish Prussia, 20,000; Wurtemberg, 19,000; the Grand Duchy of Baden, 18,000; and the Duchy of Hesse, 8000. The total production of the German vineyards in 1872 was 2,000 000 hectolitres of wine. In Hungary there are 375,000 hectares under Vines, producing annually 12,628,000 hectolitres of wine; this is double the land under Vines in Austria, and the most considerable in extent after that of France. In Roumania there are 95,500 hectares under Vines. In Russia the average production is about 2,000,000 hectolitres [1 hectolitre = 22 gallons about] of wine. Spain has 1,000,000 acres under Vines. The annual production of wine in Italy is from 28,000,000 to 30,000,000 hectolitres, valued at £40,000,000. The entire world produces 150,000,000 hectolitres of wine—France produces on the average nearly half, of which only about 3 000,000 hectolitres are exported. Every year over 10,000,000 lb. of Grapes are sold in the city of Paris; what the consumption throughout the country is it is impossible to estimate. The export of fruits for the table from France were, in kilogrammes:—1871, 35,566,649; 1872, 25,995,955; 1873, 29,245 384; 1874, 63 743 540. The imports of table fruit, however, exceed the exports, ranging from 52,000,000 to 71,000,000 kilos. per annum. The exports of Chestnuts are from 4,000,000 to 6,000,000 kilos., and the imports about 3,000,000 kilos.

—— We note the fact that our correspondent Mr. A. DEAN, of Bedfont, was elected a member of the School Board for Feltham, Middlesex, on Saturday last, taking second place on the poll.

—— In the *Journal of the Central Horticultural Society of France* is the report of a commission appointed by the Society to examine the FLORAL DECORATIONS IN THE APARTMENTS OF THE PALACE OF THE ELYSÉE on the occasion of a grand evening given by the Marshal MACMAHON. Some of the particulars will interest those who have to conduct the arrangement of floral decorations on a large scale. The decorations at the Elysée were designed and executed by Mr. DEBRIE, sen., who employed no fewer than 4780 plants in pots—from large Palms, Camellias, &c., to Primulas and Tulips, &c.—300 dozen bunches of green moss, and upwards of 350 yards of gilded rattan and other edgings. The large entrance vestibule was ornamented at the lower end with a group of large specimens of Seaforthia elegans and Phœnix leonensis, their handsome shining silvery foliage overhanging a statue which was flanked by two splendid plants of Dracæna indivisa, about 10 feet high, and clothed with leaves to the base. At the further end of the grand staircase of honour the light and delicate foliage of two fine Cocos flexuosa was reflected in a mirror, with profusely flowered Camellias. A specimen of a red-flowered variety of Azalea indica placed at the base of this mirror was exceedingly effective. On the landing of this staircase was a magnificent Latania, surrounded by two rows of bright red Primulas, which greatly heightened its beauty. In the saloon of the small *buffet* were twelve elegant groups of Lilacs, Roses, and Camellias, which were so light and well-selected, and so beautifully reflected in the crystal furnishings, that the effect was quite magical. The saloon of the *aides-de-camp* was ornamented with two consoles furnished in the most exquisite taste with Tulips, Lilacs, Roses, and Hyacinths. In the large reception-room was a single large console bearing fourteen Azaleas of divers colours, four Camellias, fifteen Heaths, four Lilac Charles X, forty Lycopodiums, fifteen Aphelandra and Gesneras for a bordering, and two fine specimens of Cocos flexuosa in the centre, the whole forming a most seductive combination of colour, brilliancy, elegance, and lightness. The adjoining apartments were decorated in the same style in different pleasing combinations. In the hall of the Baths there was a very tasteful and brilliant combination of Vriesia Glaziouana, Aphelandra and Gesnera, with Cocos flexuosa and white Lilac. The staircases to the apartments of Madame la Maréchale were ornamented with magnificent Palms, as Phœnix, Areca, &c., various Chinese Bamboos, 6 to 10 feet high, which contributed greatly to the lightness of the decoration; and Phormium Colensoi and Veitchii. In the Council-chamber there were two splendid consoles, in the shape of a boat, very tastefully decorated with Tulips and white Primulas. But the masterpiece of all was to be found in the large *buffet*, where light hangings had to be concealed as much as possible. For this purpose thirty large Cocos flexuosa were employed, alternating